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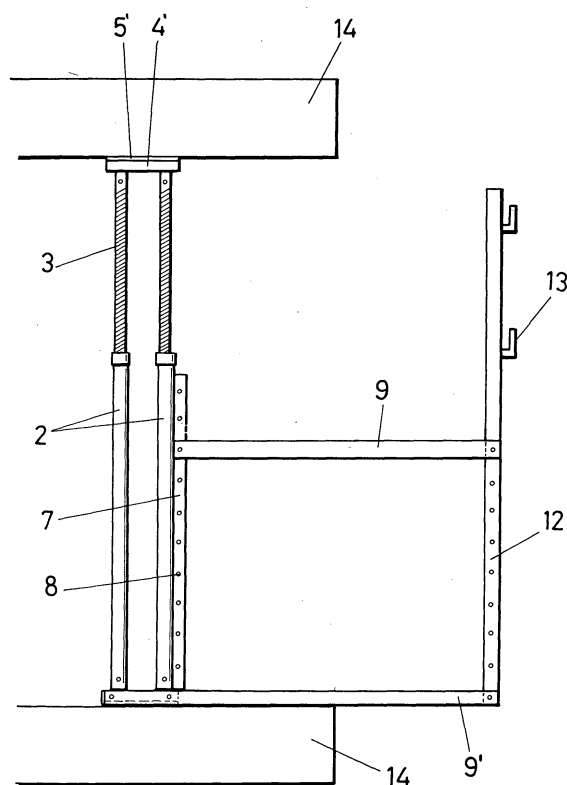
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(54) **Multifunction scaffolding**

(57) Multifunction scaffolding, intended to be used in building construction, and especially of in the construction of cantilevers or roofs, that is formed by at least one pair of telescopic columns (1) that are fixed at pressure in the space set out between two adjacent cast structures, said columns (1) having anti-slip pads (4) at their ends and crossbars (9) that extend to the outside of the building and that form the base of support for the scaffolding platform; said platform being able to remain positioned at any height along the columns (1) that sustain it. At the free ends of the aforementioned crossbars (9) a series of holes are made, that are intended to act as securing for a number of vertical stanchions intended to form part of a protection rail.



**FIG.4**

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## Description

### OBJECT OF THE INVENTION

[0001] The present invention refers to scaffolding, of the type used in building construction, which is especially suitable for use in cantilevers or eaves of roofs.

[0002] The object of the invention is to obtain a work platform, properly protected, which projects sufficiently outwards with respect to what should be the general front surface of the building facade as to be able to comfortably work on a roof or any other type of cantilever.

### BACKGROUND OF THE INVENTION

[0003] In the field of scaffolding two basic solutions exist:

[0004] The first of them consists in establishing a structure that ascends from the ground along the facade, based on vertical stanchions, horizontal crossbars and stabilising struts, a solution that allows working at any level of the building, but with which the scaffolding platforms remains attached to said facade, since the structure must be fixed to this latter to provide the necessary safety to the scaffolding, especially as its height increases, with the result that the scaffolding does not offer a suitable work surface, when the work must be carried out at the level of the eaves of the building or of any another type of cantilever.

[0005] The second solution, structurally simpler, consists in using mobile scaffolding, which is suspended from the structure by cantilever from the roof, and which is capable of vertically passing over the façade, with the array of support cables and pulleys, said cables winding and unwinding during the movement of the scaffolding whether motorised or manually. Evidently this solution does not also allow working with ease on the eaves of the building, since the scaffolding is actually suspended from said eaves and located beneath them.

### DESCRIPTION OF THE INVENTION

[0006] The scaffolding that the invention proposes fully and satisfactorily solves the problems previously set out, in as much as it allows a cantilevered work platform to be established, at any height level required, and projecting outwards from the building to any extent that might be necessary.

[0007] For this purpose, and more specifically, said scaffolding is structured using at least one pair of telescopic columns destined to join at pressure in the space set out between two adjacent cast structures, each of the said columns having anti-slip end pads, to assure a correct securing against said cast structures.

[0008] More specifically it is envisaged that each of these columns be double, structured by means of two parallel vertical telescopic tubes, to which said anti-slip pads are socket attached at each of their ends.

[0009] In accordance with another of the characteristics of the invention every column incorporates at least one auxiliary section, properly welded to its fixed sector and having a longitudinal alignment of holes, to which crossbars, that extend towards the exterior of the building, can be selectively attached, using bolts or similar of an appropriate length, and that constitute the support base for the scaffolding platform; a platform that in this way can remain positioned at any height level along the columns that sustain it.

[0010] Logically these crossbars will, in turn, incorporate similar holes to the previous ones, capable of remaining opposite these latter in the securing operation.

[0011] Such crossbars incorporate other openings at their free end, destined in turn for securing the vertical stanchions that, occupying the end exterior position of the scaffolding, are in turn intended to form part of a protective rail.

[0012] When the length of the said crossbars, by being excessive, makes it advisable, these can incorporate intermediate openings for the attachment, in an similar manner, of oblique bracing bars of the structure, that assist in its stabilisation.

[0013] As is deduced from what is previously set out, by providing adequate length to the scaffolding crossbars, its working platform or the platforms can remain sufficiently distanced with respect to the building facade to be able to work freely on its eaves or on any type of cantilever.

### DESCRIPTION OF THE DRAWINGS

[0014] To supplement this description and with the aim of leading to a better understanding of the characteristics of the invention, in accordance with a preferred example of its practical embodiment, as an integral part of this description it is accompanied by a set of drawings where in an illustrative and non-limiting way, the following have been represented:

Figure 1.- Shows a side footwear break-away of one of the columns that form the scaffolding that forms the object of the present invention.

Figure 2.- Shows, also in a side elevation view, the column of the previous figure properly mounted and provided with the auxiliary sections that constitute the means of securing the complementary crossbars to it.

Figure 3.- Shows a first embodiment of a finished scaffolding, in a representation similar to that of the previous figures.

Figures 4 and 5.- Show, finally, representations similar to that of the figure 3, corresponding to other variants of realization of the scaffolding in the first case joined between two cast structures of the

building, and in the second between a cast structure and the top eaves.

## PREFERRED EMBODIMENT OF THE INVENTION

[0015] In view of the figures presented it can be observed how in the scaffolding that the invention proposes, a column (1) is involved as a fundamental element, and which will repeat itself two or more times along the scaffolding, each column (1) being structured by means of a pair of parallel tubes (2) which finish off at their upper end in respective telescopic tubes (3), which allow the effective length of the column to be regulated at will, the pair of tubes (2) receiving at their lower end a pad (4) provided with an anti-slip surfacing (5) in its external face and of a pair of rods (6) in its internal face for their insertion into the corresponding end of the tubes (2); whereas the top tubes (3) similarly receive another shoe (4'), with its corresponding anti-slip surfacing (5') in its external face and similar rods (6') that socket attach with said tubes (3); both the tubes (2-3) and the rods (6) of the pads having respective holes (8) for definitive securing between these parts, with the assistance of respective catches.

[0016] Each column is supplemented with at least one auxiliary section (7), longitudinally attached to one of the tubes (2), acting on most of the its length, as is seen in figure 2; these auxiliary sections (7) having holes (8), evenly distributed, that in turn allow the attachment to each column, at any level of height required, of a series of crossbars (9) that form part of the scaffolding.

[0017] Preferably each column (1) will incorporate two auxiliary sections (7-7'), suitably stabilized opposite the tubes (2) that form part of it, for a greater structural rigidity of the scaffolding as regards the attachment of the crossbars (9) to the columns, as, in turn, is noted on examining figure 3.

[0018] The lower pad (4) in turn has a pair of holes (10), near its ends, that allow the fixation of a crossbar (9') at this lower end level of the columns (1), as also is seen in figure 3.

[0019] The crossbars (9-9') incorporate in their free end respective holes (11) for securing vertical stanchions (12) that similarly form part of the scaffolding, specifically forming part of its barrier or protection rail, to which effect said vertical stanchions (12) can be provided with brackets (13), adequately positioned in height, forming with the stanchions (12) concave channeling, orientated upwards, in which crossbeams of any appropriate material, which actually form the rail, can be placed.

[0020] From this basic structure the possibility exists that the crossbars (9-9') be placed at low level and/or at intermediate level and/or at several intermediate levels, as has been shown in the figures; likewise also that such crossbars are simple or double, according to the structural rigidity sought in each case, since this will be variable depending not only the actual length of the cross-

bars (9-9') but also on whether these act exclusively as a means of lateral containment or as supports for the work platform of the scaffolding.

[0021] It will be possible to establish the columns (1) between two cast structures (14-14'), as in the example of the figure 4, or between a cast structure (14) and the eaves (15) of the roof, as has been shown in figure 5, it being possible to observe in any of two cases how the scaffolding allows a work platform to be established, substantially displaced outwards with regard to said eaves (15) or to any other cantilever of the building.

[0022] Especially in the case shown in figure 5, in which the scaffolding platform extends very considerably with regard to its support columns (1), the possibility of establishing intermediate bars (16), that assist in the structural rigidity of the scaffolding, has been envisaged, for example being positioned between the edge of the lower cast structures (14) and the intermediate crossbars (9-9'), which in this case are double; to which effect openings (17) will, in turn, be established in these elements for securing them, also with the assistance of bolts or similar.

[0023] Specifically in the case that the intermediate bracing bars (16) exist, the columns (1) can have solely one auxiliary section (7), as has also been shown in figure 5.

[0024] As is deduced from what has been previously set out, the scaffolding is multifunctional given the wide range of possibilities that its removable structure offers.

## Claims

1. Multifunctional scaffolding, of the type used in building construction, that being especially suitable for works to be carried out on the eaves of the roof or on any other type of cantilever, is **characterized by** being formed by at least one pair of telescopic columns, intended to be secured between two adjacent cast structures of the building and fitted with means of securing of at least one pair of crossbars that projected horizontally towards the outside of the building and that, with an appropriate length, act simultaneously and indistinctly as a means of support for the scaffolding work platform or platforms, as well as also as means of support for its protection rail.
2. Multifunctional scaffolding, according to the 1 claim, characterised because every column is formed by means of two parallel telescopic tubes, each of which is of adjustable length and possesses means of pressing against the cast structures.
3. Multifunctional scaffolding, according to the 2 claim, characterised because every column finishes off at each of its ends with a pad fitted with a surfacing of anti-slip material in its external face, a pad that in

its internal face incorporates a pair of rods that are socket-attachable to the respective telescopic tubes of the column to which said pads are secured by means of bolts or by any other means.

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4. Multifunctional scaffolding, according to previous claims, characterised because every column incorporates at least one auxiliary section that longitudinally passes along the fixed and lower sector of at least one of its telescopic tubes, an auxiliary section provided with a number of holes, uniformly distributed, for securing also by means of bolts or similar at any height level of the crossbars that form part of the scaffolding; it having been envisaged that the lower pad also incorporates a pair of holes, at its ends, for securing a crossbar at this lower end level. 10 15
5. Multifunctional scaffolding, according to previous claims, characterised because the crossbars incorporate at one of its ends holes for securing to the auxiliary section or sections of the corresponding column, and at its opposite end an opening for securing of the stanchions that form part of the protection rail of the scaffolding. 20 25
6. Multifunctional scaffolding, according to the 5 claim, characterised because the crossbars incorporate in their central area other supplementary openings for optional securing of an oblique bar that acts as a means of bracing of the scaffolding structure. 30

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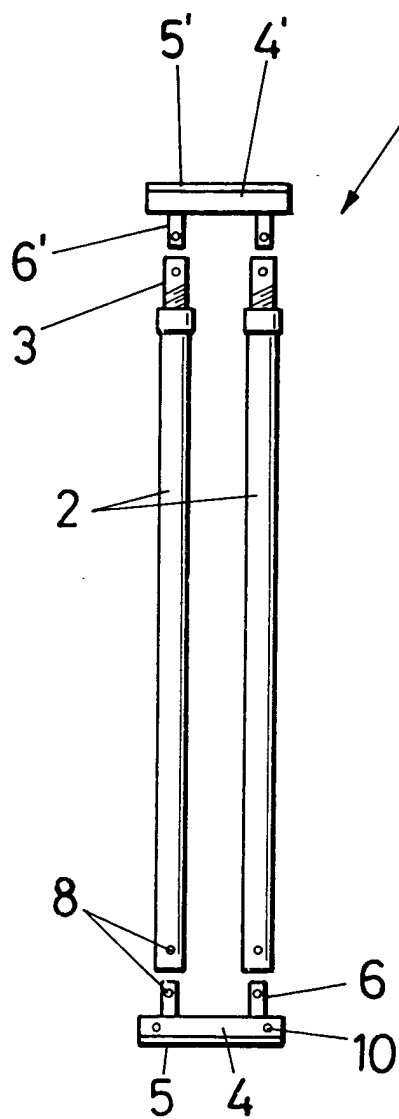


FIG.1

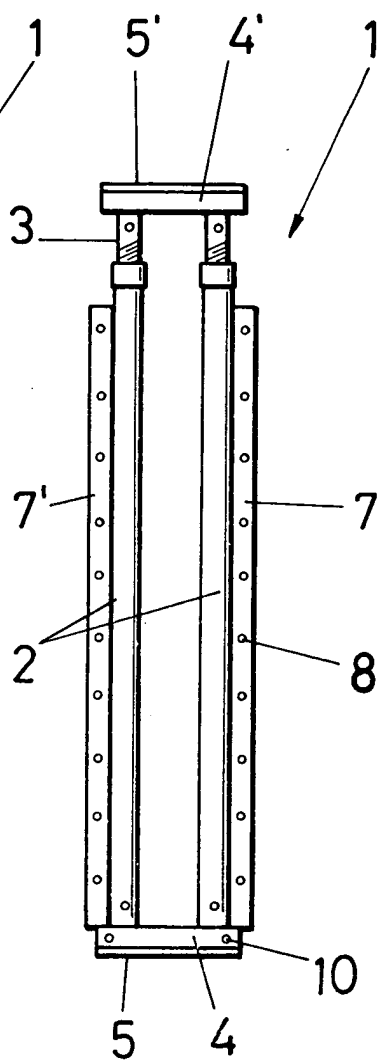


FIG.2

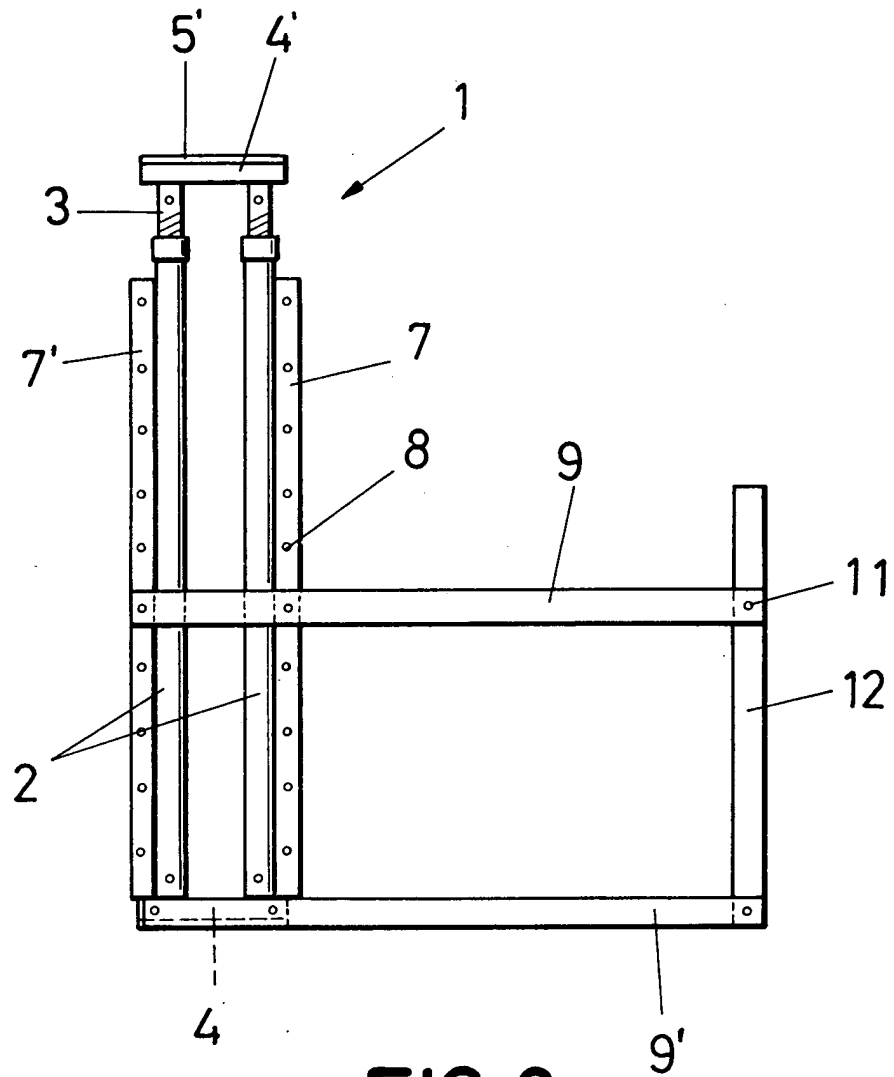


FIG.3

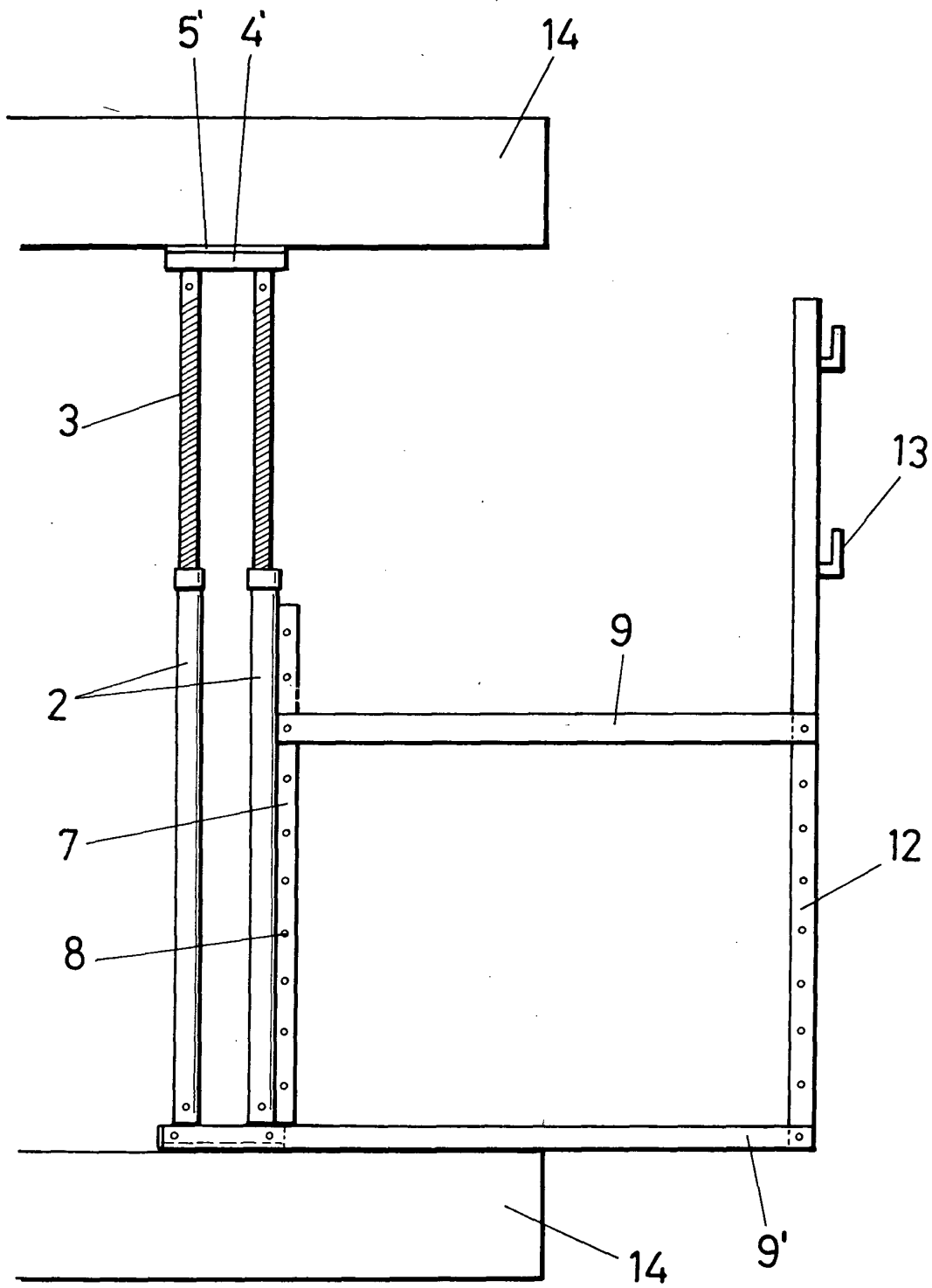


FIG.4

